

ORIGINAL ARTICLE

An outbreak no longer: factors contributing to the return of syphilis in Greater Manchester

M Ashton, W Sopwith, P Clark, D McKelvey, L Lighton, D Mandal

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See end of article for
authors' affiliations

Correspondence to:
Matthew Ashton,
Communicable Disease
Surveillance Centre (North
West), 57a Upper
Northgate Street, Chester
CH1 4EF, UK;
matthew.ashton@hpa.org.uk

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Background: In the past few years, increased diagnoses of syphilis have been reported in cities around Britain and Europe. Enhanced surveillance of cases began in 1999 to identify the epidemiology of this increase in Greater Manchester.

Methods: Information was collected on all cases of syphilis newly diagnosed in genitourinary medicine (GUM) clinics in Greater Manchester between January 1999 and November 2002. The data collected included demographic information and information about other sexually transmitted infections, sexual behaviour, perception of risk of infection, and awareness of syphilis transmission.

Results: The majority of cases identified were white homosexual men resident in Greater Manchester. Of the 414 cases diagnosed, 74% had either a primary or secondary stage of syphilis infection and 37% of cases were HIV positive. High numbers of individuals practised unprotected oral sex despite good awareness of the risk of infection with syphilis. There is evidence that the way people are meeting sexual contacts is changing, with increasing numbers meeting most of their partners through the internet.

Conclusions: These findings have implications for targeting interventions. The provision of rapid diagnostic and treatment services is likely to be key for the control of syphilis and potentially of subsequent increases in HIV in the region.

The incidence of infectious syphilis diagnosed from genitourinary medicine (GUM) clinics in the United Kingdom increased almost sixfold between 1996 and 2001.¹ Through this period, the greatest proportional increase in cases has been among men who have sex with men (MSM).² Several local outbreaks of syphilis have contributed to this increase, including one identified in Greater Manchester in 1999.³ Initial investigations in Manchester revealed a high proportion of cases among MSM⁴ and identified oral sex as a key transmission route for syphilis in Manchester.^{4,5}

We initiated a system of "enhanced surveillance" in February 2000, collecting epidemiological information to establish the extent of infection in Greater Manchester and illuminate the patterns of transmission.

METHODS

We devised a form for the collection of epidemiological data, including demographic data, diagnosis, and risk factors and distributed it to each of the 11 GUM clinics in Greater Manchester. Health workers completed one form for each case of syphilis by means of an interview or from case notes where this was not possible. The case definition used was all cases of laboratory confirmed infectious syphilis diagnosed in Greater Manchester from 1999 onwards. For cases diagnosed in 1999 and early 2000, as much data as possible were collected retrospectively from case notes. Completed forms were returned to the North West Office of the Communicable Disease Surveillance Centre (CDSC NW) for collation, data entry, and data analysis.

RESULTS

Between January 1999 and November 2002, there were 414 cases of syphilis reported to the enhanced surveillance database by GUM clinics in Greater Manchester. Of these cases, 93% (377/405) were male and 81% (330/405) were homosexual. Of those for whom data were available, 93% of cases (354/382) were born in the United Kingdom, and 82%

(310/380) were residents of Greater Manchester. There was no particular residential clustering of cases. The majority of cases (90%; 342/381) were white. The next most significant defined ethnic groups of cases were "Black Caribbean" and "Indian" (each 2.1%; 8/381).

The epidemic curve demonstrates some seasonal variation in reporting of infection, with the New Year and summer periods appearing to be key times for identifying new cases (fig 1). Of those for whom a diagnosis was available, 79% of cases (289/364) were either at primary or secondary stages of infection and the ratio of primary to secondary to early latent cases did not vary significantly during the period reported. Since 1999, two thirds of cases were under 35 years old and the peak incidence was among 31–35 year olds.

Most cases (71%; 226/317) were self referrals to GUM clinics and only 10% of cases were referred by general practitioners. Cases often reported other infections in addition to syphilis; 30% (85/288) of the two thirds for whom data were available reported a concurrent infection and 35% of cases were HIV positive (107/308). The HIV status of 106 cases (26% of the total) was not known. In addition to concurrent infections, 52% of cases (201/386) reported having had a previous STI.

Oral sex is a key transmission route for syphilis in Greater Manchester. Very few cases (7%, 12/169) reported using a condom at any time for oral sex (that is, using one sometimes, mostly, or always) and this was in stark contrast to practices for anal sex, for which 95% (148/156) of cases reported using a condom at some time (table 1). Cross tabulation of condom use by perceived risk of catching syphilis from an infected person through unprotected oral sex shows that 61% of homosexual men (87/143) believed the chance of catching syphilis was high, but reported never using a condom. Of these, 70% (61/87) were also aware of the outbreak of syphilis in Greater Manchester before attending the clinic.

There is evidence that the means by which cases meet sexual contacts are changing. Between 2001 and 2002, the proportion of cases locating contacts through the internet

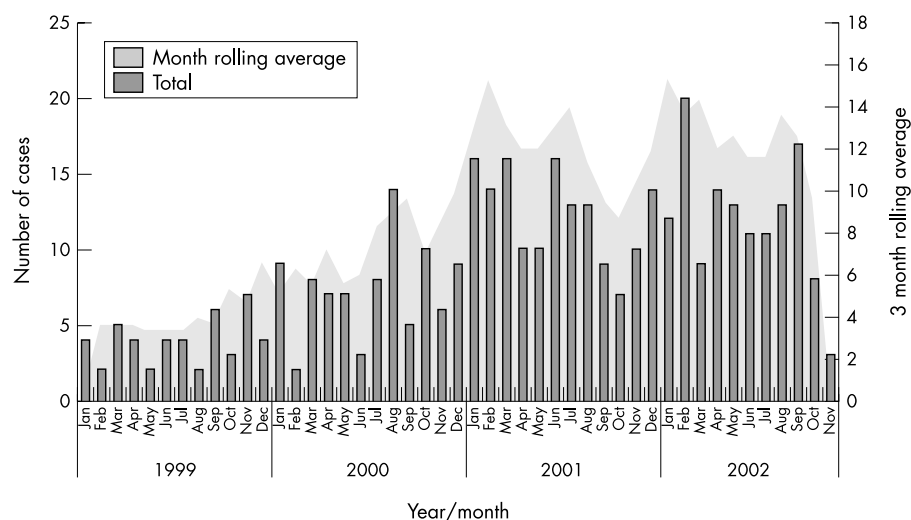


Figure 1 Reported cases of syphilis in Greater Manchester between January 1999 and November 2002, by month and showing 3 month rolling average.

Table 1 Frequency of condom use reported by cases of syphilis for oral and anal sex

Condom use	Oral sex		Anal sex	
	Cases	%	Cases	%
Never	157	93	8	5
Sometimes	10	6	33	21
Mostly	1	1	51	33
Always	1	1	64	41
Total	169	100	156	100
(Unknown)	(245)		(258)	

markedly increased, compared with the more traditional venues of pubs and clubs. In 2002, almost 30% of "high risk" cases (those reporting 10 or more partners in the past year) used the internet to locate most of their contacts.

DISCUSSION

The sustained increase in the number of cases of syphilis in Greater Manchester demanded ongoing surveillance following the initial outbreak investigation. This reveals a high proportion of those practising oral sex reporting never using a condom. Almost two thirds of these cases believed that the chance of catching syphilis from oral sex was high. Of those who believed oral sex to be risky, 70% were also aware of the syphilis outbreak before attending the clinic. These findings suggest not only an increase in high risk sexual behaviour but also an increase despite widespread awareness of the risks.

There is evidence that safer sex messages targeted at the homosexual community in Manchester since 2000 have had some impact. In August 2000, only 37% of the 27 cases interviewed considered unprotected oral sex to be a high risk activity for catching syphilis,⁴ compared with 65% shown here. Despite the increased awareness, transmission of syphilis has continued in Manchester and remains focused within the gay community.

Long waiting lists for GUM services are identified as possible factors contributing to missed cases of syphilis.⁴ Prolonged waiting times for appointments at GUM services are reported nationwide.⁶ The majority of syphilis cases reported here were identified through self referral at GUM clinics and other health services have not generally been considered by patients in the past as reliable sources of advice or care.⁴ Improvements in GUM services are urgently required, therefore, to enable effective control of syphilis in Manchester, and strengthening

the role of other health services such as general practitioners should also be considered.⁷

There is evidence that the routes by which people locate sexual contacts in Manchester are changing. Between 2001 and 2002, the greatest percentage increase was the use of the internet to locate contacts. This change in behaviour has implications for the targeting of intervention strategies.

As with other studies, a significant proportion of cases of syphilis were coinfecting with HIV. Recent studies in Amsterdam and Switzerland report increasing levels of high risk sexual behaviour among individuals with HIV^{8,9} and there is some indication that the introduction of antiretroviral therapies has contributed to this.⁸ A twofold to fivefold increased risk of HIV infection has been reported for patients with existing sexually transmitted infections, including syphilis.¹⁰ It is not clear in the Manchester cohort whether the levels of concurrent infection are linked with unsafe sexual behaviour or a biological effect of concurrent infection. There is a very real risk of a significant increase in HIV infection among those infected with syphilis and this potential association should be made clear in intervention strategies. The rapid detection and treatment of syphilis may be a key factor in the successful attainment of the government's target to reduce new cases of HIV by 25% by 2007.¹¹

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CONTRIBUTORS

MA and WS analysis and writing; PC, LL, DMcK, and DM, members of Outbreak Investigation Team.

Authors' affiliations

M Ashton, W Sopwith, Communicable Disease Surveillance Centre (North West), 57a Upper Northgate Street, Chester CH1 4EF, UK

P Clark, Public Health Sector, Liverpool John Moores University, 70 Great Crosshall Street, Liverpool L3 2AB, UK

D McKelvey, Trafford South PCT, Oaklands House, Washway Road, Sale, Manchester M33 6FS, UK

L Lighton, Greater Manchester Health Protection Unit, Floor 7b, Peel House, Albert Street, Eccles, Manchester M30 0NJ, UK

D Mandal, Manchester Royal Infirmary, GUM Department, Oxford Road, Manchester M13 9WL, UK

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